UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/816,369	04/01/2004	Heribert Schwarz	2001P15115WOUS	9730

46726 7590 12/11/2006

BSH HOME APPLIANCES CORPORATION
INTELLECTUAL PROPERTY DEPARTMENT
100 BOSCH BOULEVARD
NEW BERN, NC 28562

EXAMINER	
TILL, TERRENCE R	
ART UNIT	**PAPER NUMBER**
1744	

DATE MAILED: 12/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/816,369
Filing Date: April 01, 2004
Appellant(s): SCHWARZ ET AL.

Craig J. Loest
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 10/27/06 appealing from the Office action mailed 4/10/06.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

No amendment after final has been filed.

It should be noted that a complete list of claims were presented in an After-Final response, but this list of claims was unamended from the previous amendment filed 1/30/06. The After-Final response was a request for reconsideration with a listing of the finally rejected claims.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

WITHDRAWN REJECTIONS

The following grounds of rejection are not presented for review on appeal because they have been withdrawn by the examiner. Claims 13, 16-19 and 22 being rejected under 35 U.S.C. 102(b) as being anticipated by Kuwahara have been withdrawn. Claims 1, 2, 4-7 and 11

being rejected under 35 U.S.C. 102(b) as being anticipated by Osterdahl have also been withdrawn. See the continuation sheet of the Advisory Action.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

3,454,978	Kuwahara	7-1969
6,125,501	Yip	10-2000

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 4-7, 9, 11, are rejected under 35 U.S.C. 102(b) as being anticipated by Kuwahara.

Please note: In the Final Office Action, claims 1, 2, 4-7, 9, 11 were written as "11, 2, 4-7, 9, 11". This typographical error has been corrected in the Examiner's Answer.

The patent to Kuwahara discloses all the recited subject matter of a device for sucking up particles to be collected, the device comprising: at least one collection chamber 2 in which is placed a filter bag 10, for accumulating the particles; a suction device 15; at least one reception chamber 13,"a", storing said suction device; a partition (tapered conic section; see figure 1)

separating said collection chamber from said reception chamber and having a partition surface 8, said partition having an entry orifice 9 formed therein for channeling an air stream from said collection chamber to said suction device, said entry orifice of said partition coupling said collection chamber to said suction device in the reception chamber; forming air guide funnel having an entry surface forming a part of said partition surface. The air guide funnel is provided, with respect to said entry surface, in such that an approximately straight suction air stream is provided from suction device in said collection chamber to said reception chamber. Said air guide funnel narrows largely continuously in a direction of said suction device, and said suction device has a blower with an entry orifice formed therein; and said air guide funnel is considered to have an exit surface having a substantially circular configuration and a diameter entry orifice of said corresponding substantially to said blower of said suction device. Additionally, said air guide funnel is integrated as an independent structural part into said partition. Also, said air guide funnel is integrated as an independent structural part into said partitions well as form a one-piece jointly produced structural part. Kuwahara also discloses a canister-type vacuum cleaner having a dome shaped intervention guard element 37, which is also a filter, blocking the inlet to the reception chamber "a". Said intervention guard element is a dome-shaped ribbed body (ribs are the lines in Figure 1) having gaps formed therein for a largely unobstructed routing of the air stream from said collection space through to said suction device.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 3 and 13-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuwahara in view of Yip (previously cited).

The patent to Kuwahara discloses most of the recited subject matter, but does not disclose the air guide funnel having an inlet orifice having a substantially rectangular cross-section and an exit orifice having a substantially circular cross-section. The patent to Yip discloses a vacuum cleaner comprising: at least one collection chamber 8 for accumulating the particles; a suction device 40,50; at least one reception chamber 30 storing said suction device; a partition 12 separating said collection chamber from said reception chamber and having a partition surface,

said partition having an entry orifice 20 formed therein for channeling an air stream from said collection chamber to said suction device, said entry orifice of said partition coupling said collection chamber to said suction device in reception chamber; and an air guide funnel 22 having an entry surface forming a part of said partition surface. The air guide funnel is provided with a substantially rectangular entry surface on a same side as said collection chamber and an exit surface having a substantially circular configuration (see figure 3, behind lattice 98 the fan opening appears round) and a diameter entry orifice of said corresponding substantially to said blower of said suction device. Therefore, because these two vacuum cleaners with partition walls that have air guide funnels were art-recognized equivalents at the time the invention was made, one of ordinary skill in the art would have found it obvious to substitute the air guide funnel shape of Kuwahara for the funnel shape of Yip, where Kuwahara would have a substantially rectangular entry surface on a same side as said collection chamber and an exit surface having a substantially circular configuration, since such a modification would have involved a mere change in the shape or form of a component. A change in shape or form is generally recognized as being within the level of ordinary skill in the art. In re Dailey, 149 USPQ 47 (CCPA 1976). With respect to claims 14, 15, 20 and 21, although Kuwahara does not disclose that the air guide funnel, the partition, and the intervention guard element are constructed together as a single integrally formed structural part, it would have been obvious to a person skilled in the art at the time the invention was made to modify the air guide funnel, the partition, and the intervention guard element to be constructed together as a single integrally formed structural part as such parts-forming is considered within the purview of those skilled in the art.

(10) Response to Argument

Claims 1, 2, 4-7, 9, 11, are rejected under 35 U.S.C. 102(b) as being anticipated by Kuwahara.

With respect to appellant's argument (page 10, last two lines to page 11, line 4) that "Kuwahara does not disclose, among other things, "a partition separating said collection chamber from said reception chamber and having a partition surface, said partition having an inlet orifice formed therein for channeling an air stream from said collection chamber to said suction device, said inlet orifice of said partition coupling said collection chamber to said suction device in said reception chamber[,]". The examiner has clearly pointed out in the grounds of rejection that Kuwahara does disclose a partition 8 (see Kuwahara; column 2, lines 20-25) separating said collection chamber from said reception chamber and having a partition surface with an inlet orifice 9 (see figure 1; guard 37 of Kuwahara covers it) coupling the collection chamber to the suction device. By "coupling", the examiner means that the inlet orifice 9, which is inserted into mouth 16 of the reception chamber 13, "a", fluidly connects (couples) the collection chamber to the suction device.

With respect to appellant's argument (page 11) that "Kuwahara does not disclose any portion of the partition coupling the collecting chamber to the suction device in the reception chamber. Rather, the partition (8) of Kuwahara terminates at the end of the spout (9) and the free end of the spout (9) is not coupled to anything else. The entire purpose of Kuwahara is to have the spout (9) spaced apart and uncoupled from the opening tube (16) to form an open space between the spout (9) and the opening tube (16) that forms the circular mouth (c). The secondary airflow passes through the open space of the circular mouth (c) and provides the Venturi effect

through the Venturi-shaped annular passage (d). In Kuwahara, the end of the annular spout (9) of the partition (8) must be free and uncoupled from other elements to provide this airflow through the open space of the circular mouth (c). Using any part of the partition (8) to couple the dust collecting chamber (7) to any other element would eliminate the circular mouth (c) prevent the secondary air flow that provides the Venturi effect in Kuwahara. Therefore, not only does Kuwahara not disclose this element of Claim 1, but Kuwahara specifically teaches away from this element".

It is true that Kuwahara does not show any physical, direct connection between the partition and the suction device. As the examiner stated above, that is not his interpretation. It should also be pointed out that claim 1 does not recited a physical, direct connection, as argued by appellants above.

Additionally, Appellant's disclosed device also does not show a physical, direct connection between the partition and suction device. As can be seen in Figure 4 of appellant's drawings and on page 11 of appellant's specification:

> "the reception chamber MR is illustrated, enlarged, in a side view in Fig. 4 by a cross-sectional image. In this case, the interior of the air guide funnel LT ends in an approximately circular exit orifice KRO. The blower GB is coupled mechanically to the latter via end-face sealing elements GT. Impellers LR of the blower GB are in this case guided on the end face in the sealing element GT where operation causes them to be largely looped up closed together. The sealing element GT thereby forms a buffer between the respective impeller, such as, for example, LR, and the outer housing of the blower GB".

It is clear from appellant's description on page 11 and figure 4 of the drawings that the partition "TW" (see page 9, line 11) and guide funnel "LT" of appellant's device do not couple said collection chamber to said suction device "GB" by any physical means. Instead, the partition "TW", and guide funnel "LT", are physically separated from the suction device "GB" and reception chamber "MR" by a sealing element "GT". Appellant's disclosed device does not couple the collection chamber to said suction device in the reception chamber any more than Kuwahara. Kuwahara certainly operates differently than appellant's disclosed device, but the law of anticipation requires that a distinction be made between the invention described or taught and the invention claimed. The question of whether the reference is analogous art, or operates differently, is irrelevant to whether the reference anticipates the claimed invention. The reference may be from an entirely different field of endeavor than that of the claimed invention or may be directed to an entirely different problem from that addressed by the inventor. Yet, the reference will still anticipate the claimed subject matter if it explicitly or inherently discloses every limitation recited in the claims. In re Schreiber 44 USPQ2d 1429 (CAFC 1997).

With respect to claim 11, Appellant argues that the intervention guard and filter element are two separate elements recited by the claim. In addition, Claim 1 recites that the intervention guard element is "connected to the air guide funnel" and Claim 11 recites that the filter element "is disposed upstream of said entry surface of said air guide funnel." Therefore, one element is connected to the air guide funnel and the other element is disposed upstream of the air guide funnel. These limitations further clarify that they are separate elements because they are located in different positions with respect to the air guide funnel.

In figure 3 appellant shows a filter "FI" which is in the same location as the filter/guard element of Kuwahara. Additionally, the examiner stated that the guard element is a dome-shaped ribbed body (ribs are the lines in Figure 1) having gaps formed therein for a largely unobstructed routing of the air stream from said collection space through to said suction device.

Claims 3 and 13-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuwahara in view of Yip

With respect to appellant's argument (page 13, last paragraph to page 14, first paragraph) that "the Examiner states that in the fan opening appears round behind the lattice in Fig. 3. Applicants respectfully disagree. Nothing in Yip indicates that the feature identified by the Examiner is actually the rear opening (24) or that this feature is actually circular. This feature could be part of the fan (40) or some other part not identified in the description. If this truly was a circular opening, the change in cross-section shape should have been indicated in the cross-sectional Fig. 1. Every other opening in vacuum cleaner is square, and there is no reason to believe the rear opening (24) is anything different".

This is clearly an instance of differing opinions. The examiner still maintains that the opening behind lattice 90, shown in figure 3, is circular. With respect to the argument that "[i]f this truly was a circular opening, the change in cross-section shape should have been indicated in the cross-sectional Fig. 1", that is simply not true. The cross-section of figure 1 is a two dimensional cross-section that only shows a tapering down of height from the lattice 90 to the fan inlet. Appellant could not with any certainty tell what the shape of the fan inlet is from a two dimensional drawing whose view is orthogonal to the plane of the inlet. That is why the examiner relied on figure 3. Additionally, the impeller creating the suction is a centrifugal

impeller. These kinds of impellers have a series of vanes sandwiched between two plates. The plate on the inlet side is a donut-shaped plate with the air inlet being in the center. The plate in the motor side is a solid disc upon which the motor shaft is mounted. The air is taken in through the hole in the donut-shaped plate and then forced out to the periphery of the impeller. Because of this mode of operation, the examiner is reasonably certain that the inlet in the impeller is circular and that the cross-section of the air guide funnel exit of Yip is circular. Those skilled in the art at the time the invention was made would all have the good engineering sense to make the cross-section of the air guide funnel exit of Yip round to match the inlet of the impeller. To have a rectangular cross-section of the air guide funnel exit immediately adjacent a circular impeller inlet would cause a great deal of airflow disturbance. It would be antithetical to having an efficient vacuum cleaner.

Appellant further argues "there is no teaching, suggestion or motivation to combine it with the vacuum cleaner of Kuwahara. Kuwahara discloses a cylindrical canister vacuum cleaner having a circular shape along the entire device. Kuwahara goes into extreme detail on how all the portions of the vacuum cleaner are circular and tubular to provide the desired airflow. The entire purpose of Kuwahara is to create a desired airflow through the canister that generates a Venturi effect and improves suction for the vacuum. This desired airflow and improved suction is a result of the circular designs providing a smooth airflow path through the device. Every portion of Kuwahara, including the lid (2), the circular rubber packing (12), the tubular dust collecting chamber (7), the round partition (8), the annular spout portion (9), the circular mouth (c), the annular nozzle (17), the tubular partition (13), and the tubular main body (1), are specifically designed to have a continuous circular cross-section shape".

It should be pointed out that it is the air guide funnel exit where the criticality lies in Kuwahara; not the inlet. The outlet must be circular to match opening tube 16 to create the venturi effect. The air guide funnel inlet shape, which starts approximately where the filter bag ends, has no such criticality. It could easily be modified to be rectangular without affecting the functioning of the device.

With respect to appellant's argument that "[t]he present application explains that the rectangular shape of the inlet is significant to increase the size of the entry surface for the air funnel guide to help reduce air turbulence and noise within the vacuum on page 3, lines 13-25", no where on page 3 does it say that it is the shape that is significant.

Page 3, lines 13-25 state:

> "Since the partition has as entry orifice formed from the air guide funnel, the entry surface of which forms the essential part of the partition surface, an excessive pressure loss of the air stream from the collection space or collection chamber to the suction device is largely avoided. Furthermore, as a result, an excessively troublesome generation of noise is largely avoided. This is because, the larger the selected entry surface the air guide funnel is, the less resistance opposes the air stream directed toward the suction device. It is thereby possible to have much less air turbulence in the direction of the collection space. Overall, a directed air stream from the collection space through the air guide funnel to the suction device can be provided in an improved way."

It should be pointed out that applicant has not disclosed that having a rectangular air guide funnel inlet solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with any shape inlet. Given that appellant's dust

collecting chamber is rectangular in cross-section, it is clear to the examiner that the inlet shape was picked to correspond to the cross-sectional shape of the dust collection chamber and then become circular to correspond to the impeller inlet. It is conceded that Kuwahara's components employ all circular cross-sections, but appellant has stated no significance of having a rectangular air guide funnel inlet.

With respect to appellant's arguments regarding *in re Dailey*, it is the examiner's position that there is no significant reason why the configuration of the rectangular air guide funnel inlet is needed and, as stated above, Kuwahara, as modified by Yip, to have a rectangular air guide funnel inlet would not render Kuwahara inoperable or adversely affect operation.

With respect to appellant's arguments regarding *ex parte Jeffrey Moore*, the Board of Appeals cites that there is a specific advantage to the shape of appellant's device. The advantage to the rectangular air guide funnel inlet opening is in dispute. The examiner does not see a stated advantage mentioned in the specification.

With respect to applicant's arguments concerning claim 15, it has been held that the term "integral" is sufficiently broad to embrace constructions united by such means as fastening and welding. In re Hotte, 177 USPQ 326, 328 (CCPA 1973). Thus an integrally formed structural part can be made of multiple pieces, when assembled as a unit, make a single element.

Appellant's arguments for claim 19 are similar to those mentioned regarding claim 13. Both independent claims recite an air guide inlet orifice of rectangular cross-section and a circular exit orifice cross-section.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Terrence ~~R.~~ Till

Conferees:

Gladys P. Corcoran

Jennifer Michener
QAS - Appeals
TC 1700

Jennifer K. Michener